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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* CLARK WOODY, P. GREGORY VELEZ,  
JEFFREY S. HOFFMAN, and STEPHEN P. GANGLER

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Appeal 2009-006942  
Application 09/614,898  
Technology Center 3700

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Before: WILLIAM F. PATE III, STEFAN STAICOVICI, and  
KEN B. BARRETT, *Administrative Patent Judges*.

PATE III, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1-4, 7, 8, 11, 12, 15-18, 22-24, 26-30 and 34-39. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

The claims are directed to an apparatus for and method of severing and sealing thermoplastic film. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method of severing and sealing a plurality of layers of film formed of a thermoplastic material, the method comprising the steps of:

heating a cutting edge implement to a temperature between about 600° F and about 800° F for severing and sealing a plurality of layers of the film, the temperature being sufficient to melt but not to burn a thermoplastic material;

feeding the plurality of layers of the film between the heated cutting edge implement and an opposing surface;

moving the heated cutting edge implement and the opposing surface relative to one another to pinch the plurality of layers of film therebetween; and

thereafter, suspending any relative lateral movement between the heated cutting edge implement, the plurality of layers of the film, and the opposing surface, while relatively biasing the heated cutting edge implement and the opposing surface together with the plurality of layers of film pinched therebetween, until the cutting edge implement, heated to the temperature between about 600° F and about 800° F, severs the plurality of layers of the film by melting but not burning the plurality of layers, contacts the opposing surface, and seals the plurality of layers of the film together.

## REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Wildmoser	US 4,115,182	Sep. 19, 1978
Dworak	US 5,094,657	Mar. 10, 1992
Coleman	US 5,546,732	Aug. 20, 1996
Noel	US 5,718,101	Feb. 17, 1998
Motomura	US 6,260,336 B1	Jul. 17, 2001
Gorlich	US 6,305,149 B1	Oct. 23, 2001

## REJECTIONS

Claims 1, 2, 8 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Coleman and Gorlich. Fin. Rej. 2.

Claims 3, 7 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Coleman, Gorlich and Motomura. Fin. Rej. 5.

Claims 4, 11, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Coleman, Gorlich, and Noel. Fin. Rej. 6.

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Coleman, Gorlich, and Dworak. Fin. Rej. 6.

Claims 15-18, 22, 36 and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Coleman, Gorlich, and Noel. Fin. Rej. 7.

Claims 27, 30, 33-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wildmoser, and Gorlich. Fin. Rej. 9.

Claims 28 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wildmoser, Gorlich, and Motomura. Fin. Rej. 10.

Claims 37 and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Coleman, Gorlich, Noel, and Dworak. Fin. Rej. 12.

## OPINION

We have carefully reviewed the rejections on appeal in light of the arguments of the Appellants and the Examiner. As a result of this review, we have reached the conclusion that the applied prior art establishes the *prima facie* obviousness of claims 15-18, 22, 27-30, and 34-39. However, we have also reached the conclusion that the applied prior art does not establish the *prima facie* obviousness of claims 1-4, 7, 8, 11, 12, 23, 24, and 26. Our reasons follow.

We first turn to a construction of the claimed subject matter. Appellants' claims are directed to a temperature range of 600° F to 800° F, the temperature being sufficient to melt but not burn the thermoplastic material. We find that "burn" is a non-technical term. The Examiner discussed a claim construction of the term "burn" on page 3 of the Answer without reaching an explicit conclusion. Appellants discuss "burning" on page 2 of the Specification: "For example, as the hot wire burns its way through the film, a significant amount of smoke is produced. Some of this smoke condenses on the components of the machine, leaving behind a wax residue." Therefore, for purposes of applying the art to the claimed subject matter, we will construe "burn" as a process that produces smoke or vapor which condenses on the apparatus leaving a waxy residue.

With this claim construction in mind, it is our conclusion that Gorlich does not render *prima facie* obvious the process claims on appeal. It is clear to us that Gorlich teaches vaporization as the desired process for severing the thermoplastic film. Col. 8, ll. 55-64 and col. 10, ll. 7-20. Since the Examiner relies on Gorlich to teach the process step of melting without burning, and we have determined that Gorlich severs the thermoplastic film by vaporization, the rejections of claims 1, 2, 8 and 23, as unpatentable over

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Coleman in view of Gorlich; claims 3, 7, and 24 as unpatentable over Coleman in view of Gorlich and Motomura; claims 4, 11, and 26 as unpatentable over Coleman in view of Gorlich and Noel; and claim 12 as unpatentable over Coleman in view of Gorlich and Dworak are reversed.

The Examiner also supports the rejections of the method claims on a finding of inherency. Fin. Rej. 3. Choosing the argument most favorable to the Examiner, it is as follows. First, in Coleman a plurality of films 28, 30, 34 are severed and sealed. However, in Gorlich a single thermoplastic film 92 is being severed. As such, even though the plurality of films of Coleman are heated to 600-800 deg. F, due to the thermal resistance at the interface of the heater and the first plastic layer, the existence of multiple layers with their respective interfacial thermal resistances, and as the Examiner noted, the heating time (Ans. 3, Examiner refers to it as dwell time), the plurality of layers of Coleman do not heat up to 600-800 deg. F so as to "burn" as in Gorlich's single layer film.

The problem with this analysis is that it is based on speculation. We must emphasize that the applicable jurisprudence requires that a case of inherency be founded upon evidence that *necessarily* flows from the disclosure. "Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claims limitations, it anticipates." *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565 (Fed.Cir.1992)(quoting *Mehl/Biophile Int'l Corp. v. Milgram*, 192 F.3d 1362, 1365 (Fed.Cir.1999)). Thus, this conjecture or speculation is insufficient to support the Examiner's finding of inherency.

However, turning to the apparatus claims on appeal, we agree with the Examiner's claim construction that the temperature being sufficient to melt but not to burn a thermoplastic material is a function or desired result of the

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use of the claimed controller. In view of this claim construction, the jurisprudence is clear. Apparatus claims must be distinguished from the prior art based on their structure not their function. *See, e.g., In re Schreiber*, 128 F.3d 1473, 1477-78 (Fed. Cir. 1997) (claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function); *see also In re Swinehart*, 439 F.2d 210, 213 (CCPA 1971) (“[W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.”).

Accordingly, we agree with the Examiner’s finding that Gorlich teaches a controller that heats the cutting apparatus of Gorlich to a temperature between 600°F and 900°F. Col. 8, ll. 55-64. Thus the controller of Gorlich is able to maintain Appellants’ temperature of 600°F and 800°F as claimed. We further agree with the Examiner that it would have been obvious to use this heater of Gorlich in either Coleman or Wildmoser. Ans. 3-4. For this reason we sustain the rejections of claims 15-18, 22, 36 and 39 as unpatentable over Coleman in view of Gorlich and Noel; claims 27, 30, 34 and 35 as unpatentable over Wildmoser in view of Gorlich; claims 28 and 29 as unpatentable over Wildmoser in view of Gorlich and Motomura; and claims 37 and 38 as unpatentable over Coleman in view of Gorlich, Noel and Dworak.

On page 15 of the Brief, Appellants argue that there are unexpected results with respect to the claimed subject matter. Even if Appellants had provided evidence of unexpected results (which Appellants have not), we note that the results do not go to the apparatus claims wherein Gorlich

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clearly anticipates the claimed controller having the ability to be controlled to a temperature range between 600°F and 800°F. On page 17, Appellants again argue unexpected results, and that Gorlich teaches away from the claimed subject matter. In our view, these arguments are irrelevant to Appellants' apparatus claims when Gorlich clearly teaches a controller that controls the temperature of the cutting edge implement to Appellants' claimed range.

## DECISION

The rejections of claims 1-4, 7, 8, 11, 12, 23, 24, and 26 under 35 U.S.C. § 103 are reversed.

The rejections of claims 15-18, 22, 27-30, and 34-39 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

## AFFIRMED-IN-PART

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